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EXAMINER

KURR, JASON RICHARD

ART UNIT	PAPER NUMBER
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2615

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/647,494

Applicant(s)

HERBERGER ET AL.

Examiner

Jason R. Kurr

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 3, 2007 has been entered.

Claims 1-20 have been cancelled and will not be further considered by the Examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21, 22, 31, 32 are 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cliff (US 2002/0172379 A1) in view of Klayman (US 4,819,269).

With respect to claim 21, Cliff discloses a method of generating a sound transition between a first audio work and a second audio work in a multi-channel surround sound environment, wherein said first audio work is ending and said second

audio work is beginning (pg.1 [0003]), and wherein there is provided a plurality of audio speakers (fig.1 #60) arrayed in a spaced-apart configuration, comprising: a. selecting a first transition pattern for said first audio work (fig.1 #30); b. selecting a second transition pattern for said second audio work (fig.1 #40), said transition patterns for said first and second audio work providing an audio transition between said first audio work and said second audio work (pg.2 [0037] ln.20-28), wherein (a1) each of said first and second audio works is played through said audio speakers according to said first and second transition patterns, thereby creating an impression of movement of said first and second audio works to a listener; c. playing said first audio work through said plurality of audio speakers according to said first transition pattern until said first audio work is no longer audible; d. playing said second audio work through said plurality of audio speakers according to said second transition pattern until said first audio work is no longer audible and thereafter continuing to play said second audio work through said plurality of audio speakers according to the desires of a user (pg.2,3 [0038]). It is implied that as a signal from a first audio source is faded out that is will no longer become audible to a listener and as a second signal from a second audio source is faded in that will continue to play until acted upon by an operator or until the source reaches the end of the track.

Cliff does not disclose expressly wherein the multi-channel surround sound environment comprises at least four audio speakers arrayed in a spaced-apart configuration on at least four different sides of a listener.

Klayman discloses a multi-channel surround sound environment comprising at least four audio speakers (fig.6 #72,74,76,78) arrayed in a spaced-apart configuration

on at least four different sides of a listener. At the time of the invention it would have been obvious to a person of ordinary skill in the art to connect multiple speakers to each output channel Cliff so as to surround a listener on four sides as performed by Klayman. The motivation for doing so would have been to reproduce a sound that emanates from multiple directions which would add fullness to the reproduced sound.

With respect to claim 22, Cliff discloses a method according to claim 21, wherein the steps of selecting said first and said second transition patterns is accomplished by selecting a master transition pattern which includes both said first and said second transition patterns therein (pg.2 [0037] ln.20-28). Cliff discloses that the variable gain amplifiers (fig.1 #30,40) which control the transition pattern between the first and second audio works can be implemented in a single "master" power amplifier known as a cross-fader. This cross-fader would provide means to select the amount of amplification "transition pattern" of the first and second audio works.

With respect to claim 31, Cliff discloses a method of transitioning between a first audio work and a second audio work in a multi-channel surround sound environment, wherein said first audio work is ending and said second audio work is beginning (pg.1 [0003]), and wherein there is provided a plurality of audio speakers (fig.1 #60) arrayed in a spaced-apart configuration, comprising: a. selecting a first transition pattern (fig.1 #30) for use with said first audio work, said first transition pattern providing an audible impression of movement of said first audio work when said first audio work is played according to said first transition pattern through said plurality of audio speakers; b. selecting a second transition pattern (fig.1 #40) for use with said second audio work,

said second transition pattern providing an audible impression of movement of said second audio work when said second audio work is played according to said second transition pattern through said plurality of audio speakers, said second transition pattern being selected to be complementary to said first transition pattern (pg.2 [0037] ln.20-28); c. playing said first audio work through said plurality of audio speakers according to said first transition pattern until said first audio work is no longer audible; d. playing said second audio work through said plurality of audio speakers according to said second transition pattern until said first audio work is no longer audible and thereafter continuing to play said second audio work through said plurality of audio speakers according to the desires of the listener (pg.2,3 [0038]). It is implied that as a signal from a first audio source is faded out that is will no longer become audible to a listener and as a second signal from a second audio source is faded in that will continue to play until acted upon by an operator or until the source reaches the end of the track.

Cliff does not disclose expressly wherein the multi-channel surround sound environment comprises at least four audio speakers arrayed in a spaced-apart configuration on at least four different sides of a listener.

Klayman discloses a multi-channel surround sound environment comprising at least four audio speakers (fig.6 #72,74,76,78) arrayed in a spaced-apart configuration on at least four different sides of a listener. At the time of the invention it would have been obvious to a person of ordinary skill in the art to connect multiple speakers to each output channel Cliff so as to surround a listener on four sides as performed by Klayman.

The motivation for doing so would have been to reproduce a sound that emanates from multiple directions which would add fullness to the reproduced sound.

With respect to claim 32, Cliff discloses a method according to claim 11, wherein the steps of selecting said first and said second transition patterns is accomplished by selecting a master transition pattern which includes both said first and said second transition patterns therein (pg.2 [0037] ln.20-28). Cliff discloses that the variable gain amplifiers (fig.1 #30,40) which control the transition pattern between the first and second audio works can be implemented in a single "master" power amplifier known as a cross-fader. This cross-fader would provide means to select the amount of amplification "transition pattern" of the first and second audio works.

With respect to claim 40, Cliff discloses a method according to claim 21 in view of Klayman, wherein said at least four sides of the listener are selected from a group consisting of a left side, a right side, a front side, and a rear side (Klayman: fig.6)

Claims 24-30 and 34-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cliff (US 2002/0172379 A1) in view of Klayman (US 4,819,269) and in further view of Cleary, Jr. et al (US 6,977,653 B1).

With respect to claim 24, Cliff discloses a method according to claim 21, further comprising the steps of: e. forming a graphical representation of said first transition pattern and said second transition pattern, wherein said graphical representation reflects at least approximately said impression of movement of said first and second audio works within said speakers (fig.7A,B pg.5 [0053]).

Cliff does not disclose expressly wherein the method includes displaying on a computer display device said graphical representation of said first transition pattern and said second transition pattern during the playing of said first and second audio works.

Cleary discloses a display system that displays a graphical representation of the signal levels being reproduced on left and right channel speakers (fig.1).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the display device of Cleary to display the information disclosed in the graphs of figures 7A and 7B of Cliff wherein the symbol L depicts all speakers on the left channel and the symbol R depicts all speakers on the right channel.

The motivation for doing so would have been to provide a user with visual information pertaining to the present gain levels of the first and second audio work signals. This would allow a user such as a DJ to make a visual note of a desired fade in/out level for future uses.

With respect to claim 25, Cliff discloses a method according to claim 21, further comprising the steps of: e. forming a graphical representation of said first transition pattern (fig.7A,B pg.5 [0053]).

Cliff does not disclose expressly wherein said graphical representation has at least indicia thereon representing each of said audio speakers and displaying on a computer display device said graphical representation of said first transition pattern during the playing of said first audio work.

Cleary discloses a display system that has at least indicia thereon representing audio speakers (fig.1 #10L,10R), and displays a graphical representation of the signal levels being reproduced on left and right channel speakers (fig.1).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the display device of Cleary to display the information disclosed in the graphs of figures 7A and 7B of Cliff wherein the symbol L depicts all speakers on the left channel and the symbol R depicts all speakers on the right channel.

The motivation for doing so would have been to provide a user with visual information pertaining to the present gain levels of the first and second audio work signals. This would allow a user such as a DJ to make a visual note of a desired fade in/out level for future uses.

With respect to claim 26, Cliff discloses a method according to claim 25 in view of Cleary, wherein said indicia of said audio speakers are at least approximately spaced apart on said computer display device proportionally to an actual spacing of said audio speakers. Both Cliff and Cleary disclose figures containing representations of only two speakers; hence no matter how they are presented on the display they will always be proportionally spaced with respect to the actual spacing of the speakers.

With respect to claim 27, Cliff discloses a method according to claim 25 in view of Cleary, wherein step (f) comprises the step of displaying on a computer display device said graphical representation of said first transition pattern during the playing of said first audio work, wherein said display operates at least approximately in real-time and wherein said displayed graphical representation is continuously updated to reflect the

operation of said first transition pattern. It is implied that the graphical display of Cleary continuously updates the information being displayed.

With respect to claim 28, Cliff discloses a method according to claim 21, further comprising the steps of: e. forming a graphical representation of said second transition pattern (fig.7A,B pg.5 [0053]).

Cliff does not disclose expressly wherein said graphical representation has at least indicia thereon representing each of said audio speakers and displaying on a computer display device said graphical representation of said first transition pattern during the playing of said first audio work.

Cleary discloses a display system that has at least indicia thereon representing audio speakers (fig.1 #10L,10R), and displays a graphical representation of the signal levels being reproduced on left and right channel speakers (fig.1).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the display device of Cleary to display the information disclosed in the graphs of figures 7A and 7B of Cliff wherein the symbol L depicts all speakers on the left channel and the symbol R depicts all speakers on the right channel.

The motivation for doing so would have been to provide a user with visual information pertaining to the present gain levels of the first and second audio work signals. This would allow a user such as a DJ to make a visual note of a desired fade in/out level for future uses.

With respect to claim 29, Cliff discloses a method according to claim 21, wherein at least a portion of said first transition pattern is provided by a user (pg.2 [0037] In.20-

28). It is implied that cross faders allow a DJ to manually adjust signal levels in a transition between multiple audio works.

With respect to claim 30, Cliff discloses a method according to claim 21, wherein at least a portion of said second transition pattern is provided by a user (pg.2 [0037] ln.20-28). It is implied that cross faders allow a DJ to manually adjust signal levels in a transition between multiple audio works.

With respect to claim 34, Cliff discloses a method according to claim 31, further comprising the steps of: e. forming a graphical representation of said first transition pattern, wherein said graphical representation reflects at least approximately said impression of movement of said first audio work within said speakers (fig.7A,B pg.5 [0053]).

Cliff does not disclose expressly wherein the method includes displaying on a computer display device said graphical representation of said first transition pattern during the playing of said first and second audio works.

Cleary discloses a display system that displays a graphical representation of the signal levels being reproduced on left and right channel speakers (fig.1).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the display device of Cleary to display the information disclosed in the graphs of figures 7A and 7B of Cliff wherein the symbol L depicts all speakers on the left channel and the symbol R depicts all speakers on the right channel.

The motivation for doing so would have been to provide a user with visual information pertaining to the present gain levels of the first and second audio work

signals. This would allow a user such as a DJ to make a visual note of a desired fade in/out level for future uses.

With respect to claim 35, Cliff discloses a method according to claim 31, further comprising the steps of: e. forming a graphical representation of said second transition pattern, wherein said graphical representation reflects at least approximately said impression of movement of said second audio work within said speakers (fig.7A,B pg.5 [0053]).

Cliff does not disclose expressly wherein the method includes displaying on a computer display device said graphical representation of said second transition pattern during the playing of said first and second audio works.

Cleary discloses a display system that displays a graphical representation of the signal levels being reproduced on left and right channel speakers (fig.1).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the display device of Cleary to display the information disclosed in the graphs of figures 7A and 7B of Cliff wherein the symbol L depicts all speakers on the left channel and the symbol R depicts all speakers on the right channel.

The motivation for doing so would have been to provide a user with visual information pertaining to the present gain levels of the first and second audio work signals. This would allow a user such as a DJ to make a visual note of a desired fade in/out level for future uses.

With respect to claim 36, Cliff discloses a method according to claim 31, further comprising the steps of: e. forming a graphical representation of said first transition pattern (fig.7A,B pg.5 [0053]).

Cliff does not disclose expressly wherein said graphical representation has at least indicia thereon representing each of said audio speakers and displaying on a computer display device said graphical representation of said first transition pattern during the playing of said first audio work.

Cleary discloses a display system that has at least indicia thereon representing audio speakers (fig.1 #10L,10R), and displays a graphical representation of the signal levels being reproduced on left and right channel speakers (fig.1).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the display device of Cleary to display the information disclosed in the graphs of figures 7A and 7B of Cliff.

The motivation for doing so would have been to provide a user with visual information pertaining to the present gain levels of the first and second audio work signals. This would allow a user such as a DJ to make a visual note of a desired fade in/out level for future uses.

With respect to claim 37, Cliff discloses a method according to claim 36 in view of Cleary, wherein said indicia of said audio speakers are at least approximately spaced apart on said computer display device proportionally to an actual spacing of said audio speakers. Both Cliff and Cleary disclose figures containing representations of only two

speakers, hence no matter how they are presented on the display they will always be proportionally spaced with respect to the actual spacing of the speakers.

With respect to claim 38, Cliff discloses a method according to claim 34 in view of Cleary, wherein step (f) comprises the step of displaying on a computer display device said graphical representation of said first transition pattern during the playing of said first audio work, wherein said display operates at least approximately in real-time and wherein said displayed graphical representation is continuously updated to reflect the operation of said first transition pattern. It is implied that the graphical display of Cleary continuously updates the information being displayed.

With respect to claim 39, Cliff discloses a method according to claim 31, wherein at least a portion of said first transition pattern is provided by a user (pg.2 [0037] ln.20-28). It is implied that cross faders allow a DJ to manually adjust signal levels in a transition between multiple audio works.

Claims 23 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cliff (US 2002/0172379 A1) in view of Klayman (US 4,819,269) as applied to claim 21 and 31 above, and further in view of Clemow (US 6,577,736 B1) and Raydon et al (US 3,969,588).

With respect to claim 23, Cliff discloses a method according to claim 21, however does not disclose expressly wherein said first transition pattern is selected from a group consisting of: (a1) a front-to-back transition pattern, (a2) a left side to right side transition pattern, or, (a3) a circling transition pattern.

Clemow discloses a system that allows different patterns of fading of an audio signal such as a front-to-back transition pattern (col.6 ln.27-36) and a left side to right side transition pattern (col.3 ln.40-50).

Raydon discloses a system that allows different patterns of fading of an audio signal such as a circling transition pattern (col.5 ln.29-36).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the fading patterns of Clemow and Raydon in the cross fading of Cliff.

The motivation for doing so would have been to provide a dimensional effect to the transitioning of the audio works. This would provide a smooth transitional effect that would lead one audio track to the next.

With respect to claim 33, Cliff discloses a method according to claim 31, however does not disclose expressly wherein said first transition pattern is selected from a group consisting of: (a1) a front-to-back transition pattern, (a2) a left side to right side transition pattern, or, (a3) a circling transition pattern.

Clemow discloses a system that allows different patterns of fading of an audio signal such as a front-to-back transition pattern (col.6 ln.27-36) and a left side to right side transition pattern (col.3 ln.40-50).

Raydon discloses a system that allows different patterns of fading of an audio signal such as a circling transition pattern (col.5 ln.29-36).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the fading patterns of Clemow and Raydon in the cross fading of Cliff.

The motivation for doing so would have been to provide a dimensional effect to the transitioning of the audio works. This would provide a smooth transitional effect that would lead one audio track to the next.

Response to Arguments

Applicant's arguments filed December 3, 2007 have been fully considered but they are not persuasive.

Currently the independent claims 21 and 31 disclose a multi-channel system wherein there is provided four audio speakers. This disclosure does not limit how the speakers relate to the multiple channels (i.e. 2 speakers on right channel and 2 on left channel; or 1 speaker for four separate channels). Because there is no relationship between the speakers and the multiple channels disclosed in the present claims the Examiner has interpreted the claims as having two channels with two speakers on each channel as supported by the newly cited reference Klayman (US 4,819,269). The Examiner suggests that a distinction is made over the prior art.

Conclusion


Art Unit: 2615

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Kurr whose telephone number is (571) 272-0552. The examiner can normally be reached on M-F 10:00am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 273-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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